

CARROLL (A)

MANAGEMENT  
OF THE  
GOUTY TEMPERAMENT

READ BEFORE THE NEW YORK MEDICAL JOURNAL ASSOCIATION,  
NOVEMBER 19, 1875.

By ALFRED CARROLL, M. D.,

*Consulting Physician to the Smith Infirmary, Staten Island; Member of the Medical  
Society of the County of New York, of the New York Society of Neurology, etc.*

REPRINTED FROM THE AMERICAN PRACTITIONER, DECEMBER, 1875.



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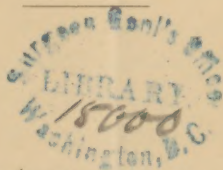
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# MANAGEMENT

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### GOUTY TEMPERAMENT.

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The "gouty temperament" depends upon excessive formation or deficient elimination (or both) of lithic or uric acid, a substance resulting from the waste of albuminous tissues and the surplus albuminous matter taken as food. One of the most important functions of the liver seems to be to convert this waste or surplus into urea, a still more highly oxidized product than lithic acid, in which form it is excreted by the kidneys. Hence, says Dr. Murchison,\* "when oxidation is imperfectly performed in the liver there is a production of insoluble lithic acid and lithates instead of urea, which is the soluble product resulting from the last stage of oxidation of nitrogenous matter."

This "lithæmic" condition does not always manifest itself by recognizable attacks of old-fashioned gout, but is often responsible for a long list of more or less obscure ailments, from "gravel," "gall-stones," various skin-eruptions—like eczema, nettlerash, boils, etc.—down to digestive disturbances, vertigo, irritability, or mental depression amounting sometimes to hypochondriasis, lumbago, various neuralgias, catarrhal susceptibility, irregular action of the heart, and a

\*Croonian Lectures on Functional Derangements of the Liver, 1874.

host of other disorders. The accumulation of fibrin in the blood, which is characteristic of rheumatism, may also arise from a retardation of the destruction of this substance by the liver.

Now to obviate this condition there are three indications to be fulfilled: 1. To limit the supply of nitrogenous matter so as to leave little surplus beyond the requirements of nutrition; 2. To promote oxidation; 3. To increase elimination.

The first of these objects is to be attained by diet; regulating both the quantity and quality of food, and refraining from substances which impede the destructive metamorphosis. To quote Murchison again, "Gradually the patient is taught by experience to become more careful as to what he eats and drinks. One thing after another he is forced to give up. First he renounces malt liquors; then he discovers that portwine, Madeira, Champagne, and Burgundy disagree, and he betakes himself for a time to 'dry sherry;' but at length this does not suit, and after an interval, during which a trial is made of claret or hock, the patient, probably under medical advice, finds temporary relief from the substitution for wines of brandy or whisky largely diluted with water. At last—unless he be misled by the fashionable but to my mind erroneous doctrine of the present day, that alcohol in one form or another is necessary for digestion or to enable a man to get through his mental or bodily work—he finds that he enjoys best health when he abstains altogether from wine and spirits, and drinks plain water. The patient goes through a like experience with regard to solid food. One dish after another, very often what he likes best, has to be given up, until at length—if he be well advised, and have the sense to follow the advice—he restricts himself to the plainest food in moderate quantity. As a rule, those articles of diet are most apt to disagree which contain much saccharine or oleaginous matter, and not, as might perhaps have been expected, nitrogenous food, if plainly cooked. In most of these cases the

digestion appears to be strongest in the morning, and the patient suffers from late dinners or suppers."

The foregoing remarks, though referring to an advanced condition of lithæmia, embody the principles to be applied to the prevention or amelioration of the earlier stages. Without actually prohibiting all the luxuries of the table, we should reduce to a minimum the amount of those which are likely to aggravate the trouble.

As regards quantity of solid food, a healthy, ordinarily active body demands daily about one-and-a-half per cent of its own weight;\* and this ration in a typical diet should comprise about nine ounces of albuminates, six ounces of fatty matter, and twenty-five ounces of carbohydrates, as starch and sugar; or, roughly estimated, one part of animal to three of vegetable food. Where we have to deal with the lithæmic tendency the proportion of animal food may advantageously be somewhat further reduced, especially when the urine becomes turbid with lithates on cooling. At all events, an excess of albuminous food is always to be avoided; as, for that matter, is also an excess of carbonaceous material, particularly of starchy substances, which many gouty digestions find difficulty in managing. Indigestible and highly-seasoned dishes are of course to be shunned; fried articles, pastry, and in general all greasy or sugared cookery should be forbidden. Among fish salmon is the most objectionable one, from the quantity of oil which its flesh contains. Ripe fruits are harmless, if not beneficial.

Malt liquors and the stronger wines have the effect of retarding metamorphosis, and are therefore inadvisable.† If wine must be taken at dinner, the least injurious is claret or

\* That is, about one per cent of "water-free" solids. In other words, a man weighing one hundred and fifty pounds requires about two and a quarter pounds of so-called solid food in every twenty-four hours.

† I have observed that where beer and wine produce rapid diuretic action, as they do in some persons, they seem to have least effect in aggravating the lithæmic tendency.



hock; better still, brandy or gin in small quantity and greatly diluted; best of all, simple water. No sweetened alcoholic drinks should be taken at any time. Coffee and tea in moderation do no harm, though I question if they do any good.

Our second object, to promote oxidation, is to be gained by regular exercise in the open air, and by no other means. The more exercise a lithæmic person can take, short of exhausting fatigue, the better for him. Walking, horseback-riding, outdoor sports of all kinds, are to be commended. Without exercise no alkaline dosing will supply the needed oxygen.

To favor elimination, the first place must be accorded to pure water, drunk beyond the demands of actual thirst. In many cases the simple procedure of taking a glass or two of water before breakfast and the same at bed-time will work wonders; but it is important that the water be really pure and not "hard." Filtered rain-water is about the nearest available approach to a typical tippie in this respect. When the urine is markedly acid or shows an excess of lithates, alkaline waters—such as lithia-water, Vichy, Carlsbad, etc.—are beneficial; but they should be taken at intervals, not habitually, and their use suspended when the urine becomes clear and loses its excessive acidity. I have lately tried—and, I think, with benefit—the biborate of soda (borax), in the proportion of twenty or thirty grains to the pint of water, of which two or three glasses may be drunk per diem. Borax is less apt to derange digestion than the alkaline carbonates, and is more effective than they in increasing the solubility of lithic acid, while it seems to be at least as efficient in augmenting the functional activity of the liver.

The action of the skin should be promoted by daily sponging, the use of the flesh-brush, etc.; and, when not otherwise contra-indicated, an occasional Turkish bath will be of service.

Medicinal agents may be required from time to time to



obviate costiveness, to stimulate a sluggish liver, or to neutralize over-acidity. The bowels must be kept in natural action, but purgation is to be avoided, as experiment has demonstrated that cathartics, as a rule, diminish the secretion of bile, and presumably therefore all other hepatic functions. As a gentle aperient, the *Rhamnus Frangula* has lately been highly vaunted, and a limited experience inclines me to believe it of value in cases of habitual constipation, though I suspect that it acts rather on the lower bowel than on the upper part of the small intestine which we wish to reach in the lithæmic subject. If used at all, it should be given in small enough quantities to produce only a natural evacuation. My own decided preference is for the resin of podophyllin, which in less than cathartic doses is indisputably cholagogue. If a tendency to constipation occur, especially if the *fæces* show a deficiency of biliary color, a pill containing not more than a quarter of a grain of podophyllin, taken at bed-time for several nights running, will usually suffice to produce healthy action.\* If further aid be needed, a short course of Friedrichshall water, in wine-glassful doses before breakfast, may be serviceable, but it should ever be borne in mind that nothing does more mischief in such cases than the abuse of purgatives. Even where gouty symptoms call for colchicum the best results of this latter drug will be obtained by avoiding its cathartic action. If we have to deal with a *bon vivant*, who will not restrain his appetite, the time-honored

\* This paper was written before I had seen the recent report of Rutherford and Vignal, whose "Experiments on the Biliary Secretion of the Dog" confirm my clinical confidence in podophyllin. But, taking a hint from the discovery by these gentlemen that the cholagogue action of the drug was increased by suspending it in bile prior to administration, I have since prescribed it in combination with ox-gall, *c. g.*

R. Resin podophyllin, . . . . grs. ij;  
 Fellis bovin. inspissat., . . . grs. xvj.  
 Saponis, . . . . . q. s. M.

Ft. mass in pil. viii divid. Thus combined the sixth of a grain may prove in some instances a sufficient dose.

"dinner-pill" may be of use to hurry the over-eaten food along before the absorbents have time to gorge themselves; and for this purpose I occasionally prescribe a pill consisting of a grain each of rhubarb and extract of aloes with a quarter or half a grain of extract of nux vomica, to be taken about half an hour after dinner. Whenever practicable, however, I would rather employ moral suasion than physic.

The dyspeptic symptoms which sometimes arise in these cases are to be met with such remedies as the circumstances may indicate. Alkalies are frequently of value in relieving heartburn, palpitation, and other gastric disturbances, and I have found much benefit from a formula recommended by Dr. Horace Dobell; viz., equal parts of bicarbonate of soda and powdered calumba with the same or half the quantity of powdered ginger, about twenty grains or a small salt-spoonful to be taken just before eating. In rarer cases, when flatulence is troublesome, dilute nitro-muriatic acid may do good; and, according to Murchison, there are instances in which "both acids and alkalies may be given advantageously, the alkalies before and the acids after a meal."

Chloride of ammonium in scruple-doses thrice daily is highly recommended by Murchison as increasing metamorphosis and elimination, and relieving hepatic congestion. It may be combined with either alkalies or acids. For a similar purpose, it will be remembered, Dr. Buckler suggested, some years ago, the treatment of gout with ammonium phosphate, a double decomposition being supposed to produce soluble lithate of ammonia and phosphate of soda.

With the treatment of gout, however, or of other acute manifestations of the lithæmic constitution, I have no present concern; my object has been solely to present a few practical suggestions for the management of the condition which may or may not lead to such acute outbreaks, but which is sure, if uncontrolled, to subject its victims to much annoyance.





